

Healthy Waters in the Coastal Zone  
FY19 Task 8  
Final Report, Grant Period October 1, 2019 to Dec 31, 2020  
Grant# NA19NOS4190152  
Compiled by Todd Janeski, VCU, Department of Life Sciences  
Virginia Department of Conservation and Recreation,  
Division of Natural Heritage

This project was funded by the Virginia Coastal Program at the Department of Environmental Quality through Grant FY19: NA19NOS4190152 of the National Oceanic and Atmospheric Administration, Office for Coastal Management, under the Coastal Zone Management Act of 1972, as amended.



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#### Overview

The Environmental Scientist/Analyst with the Virginia Commonwealth University (VCU) Department of Life Sciences (LS), Rice Rivers Center (RRC), was retained by the Virginia Department of Conservation and Recreation (DCR), Natural Heritage Program (NHP), served as the Program Manager of the Virginia Healthy Waters Program (HWP). The VA HW Program Manager maintains access to the facilities and expertise of the VDCR and continued to integrate the skills and abilities of the VCU Department of Life Sciences. The position serves as a liaison between DCR and the VCU LS/RRC to promote a coordinated, collaborative approach to integrating field capacity, applied research and outreach to inform the protection of ecologically healthy aquatic systems. This includes the oversight of programs, projects, grants and grant budgets, providing technical support to DCR Natural Heritage Division and the Virginia Coastal Zone Management Program, as it relates to coastal zone ecology, management, and restoration.

Additionally, this grant supported the VA Oyster Shell Recycling Program at the VCU RRC as an effort of Healthy *Estuarine* Waters to reclaim waste oyster shell and return it to the Chesapeake as part of Bay restoration activities.

Despite the late award due to unfortunate internal issues at the VCU, considerable effort was made to meet and exceed progress on the advancement of the Healthy Waters Program and the complete the work on time, as per the contract.

#### Healthy Waters Program

The Healthy Waters Program is supported through funding from several grant sources including the VA CZM Section 306, US EPA Section 319 Nonpoint Source Program, and the Chesapeake Bay Implementation Grant. These sources fund various aspects of the Program including the administration and oversight, Program growth and expansion, improvement in capacity, acquisition and analysis of new data and data integration.

The Healthy Waters Program, at the DCR Natural Heritage Division was challenged with limited capacity to realize significant growth during the reporting period. Programmatically, this is the greatest hurdle and has been an ongoing process of discussions regarding staff resources with senior staff. Data collection and development, which is the foundation of the program, is hindering the potential to develop a statewide expansion and with no dedicated field staff, the ability to implement measures, models or tools are toothless. However, data gaps and data integration are the priorities of the program with the goal to integrate existing VCU collected INteractive STream Assessment Resource (INSTAR) data into the NHP data explorer with the creation of new Element Occurrences (EOs) and Stream Conservation Units (SCUs). This reporting period would had demonstrated a contribution to supporting a small percentage of two

field staff from the NHP Assessment Section through the sampling season. However, limited funds prohibited this from happening during the grant cycle. Those funds were typically sourced from non-NOAA monies to address the Antidegradation aspects of the CWA.

Meetings with senior and staff level management were executed to outline EPA CBIG funding for FY20. Project description was developed, specifically since guidance was provided outlining that all tasks must directly advance the Chesapeake Bay Watershed Implementation Plan Phase 3, only. The Healthy Waters Program is identified in the FY20-23 CBIG Workplan as Objective 9 with the following output: 1) provide information to facilitate improved resource protection in the Commonwealth and to advance the identification and protection of those ecologically healthy sites, referred to as: Healthy Waters; 2) develop technical assistance tools and publications regarding the health and restoration of the Chesapeake Bay. The ConserveVirginia tool was identified to be used to maximize the benefits derived from land conservation efforts within the State and is designed to include regular updates as new data are available and priorities refined, such as the inclusion of ecologically healthy waters. A draft project description was developed identifying how to enhance the ConserveVirginia tool to include the healthy waters data as a new input and to provide guidance on the implementation of agricultural BMPs as informed by the healthy waters data. Virginia Department of Environmental Quality (DEQ) staff approached the DCR and VCU team requesting that the proposal be modified to include DEQ bioassessment data and create an input comparable to the Healthy Waters-based input. Upon analysis, the DCR determined that the effort to develop the input would require significant allocation of resources and requested that DEQ identify an additional source of funding so as not to reduce the total amount available under the CBIG grant. Several meetings with senior and staff level DEQ personnel were implemented to discuss the process and refine the actions to achieve the input for ConserveVirginia. Those meetings concluded with DEQ indicating they would pursue the development of the input and not allocate additional resources to the grant. After further consideration, DEQ indicated that due to the timing, it was unlikely to happen in the upcoming year due to competing priorities and that DCR and DEQ would collaborate on the development at a later time. Further refinements of those ConserveVirginia efforts resulted in the DEQ re-evaluating their staff capacity and developed inputs for the tool.

During the reporting period, the Program Manager continued to participate in the Chesapeake Bay Program, Goal Implementation Team (GIT) for Healthy Watersheds. As part of this GIT, the Program Manager put considerable effort toward the Chesapeake Bay Management Strategy development process, this included the coordination of DCR and DEQ. The Program Manager continued to advance Healthy Waters Bay Agreement Goal of 100% protecting the 2014 HW sites in the Chesapeake Bay by 2025. The HWP Manager continued to staff the HW Goal team remaining consistent that the Commonwealth will set their own course for long-term protection action. The GIT attempting to advance a regional modeled approach for prioritizing those areas for conservation, sharing State provided data with the intent of directing actions to protect lands. This outcome will provide the basis for strongly *guiding* how the Commonwealth advances conservation but will not likely be used as more than suggestions since Virginia will be advancing an approach that integrates the proximity to ecologically valuable terrestrial features, as identified by NHP, in the weighting. Close coordination with the Officer of the Secretary of Natural Resources (SNR) indicated that it was unlikely the Commonwealth would direct conservation and protection actions through an unfunded and directive-based approach. The

HWP Manager provided an update on the status of a conservation model being developed at DCR NHP. Working with NHP staff, the modeled approach seeks to identify those lands and areas needed to ensure protection of aquatic ecological health. The VA approach utilizes a refined approach focusing on state assessments for vulnerabilities and priorities. In addition, the NHP approach will be integrated into the ongoing targeting of conservation and preservation as it relates to those needs under DCR.

With support from CBIG FY18 and 319 monies, NHP and VCU have continued to identify a watershed scale approach to protect ecologically healthy waters. Those sites have unique characteristics for each watershed that are relative to slope, soils, cover type and proximity to terrestrial heritage resources. Using the NHD+ catchments and models produced at the NHP, the HWP is advancing the development of conservation planning tools that will ensure HWs. This project included input from the SNR and is consistent with those outputs outlined below with respect to the CB Program Goals.

Through funding from EPA 319, the Program Manager continued to manage the process by which watersheds and waterbodies are identified as Healthy and how the Program communicates outward. Continued effort was put toward sharing and communicating the Stream Ecological Health Assessment for the Chowan River Basin, Virginia and North Carolina. More recently, the Albemarle-Pamlico National Estuary Partnership (APNEP) Director requested assistance from the HWP Manager in drafting an improved MOU between the states of NC and VA that would advance land conservation goals, protection of aquatic integrity and implement the APNEP Comprehensive Conservation Management Plan. That process was formalized by the VA SNR requesting the HWP Manager to coordinate the development and implementation of an MOU between VA and NC in the APNEP based to advance shared watershed priorities and meet the objectives under the 2017 APNEP MOU. This process lead to the HWP Manager drafting and leading the development of a Governor's Agreement between VA and NC for shared watershed priorities with allocation of resources to meeting objectives of resource protection. The HWP Manager worked in close coordination with the APNEP Director and Policy Manager to provide regular coordinated meetings, track progress through a web-based timeline and create the final language for the MOA.

### **Healthy Estuarine Waters-VA Oyster Shell Recycling Program**

A small portion of the grant from the VA Coastal Zone Management Program to the VCU RRC's VA Oyster Shell Recycling Program (VOSRP). The goals are to reclaim waste oyster shell and return it to the VA portion of the Chesapeake. The grant supported the development of banners, stickers, purchase of containers and supported the bulk movement of shell from local storage sites to the VCU RRC. The Program saw considerable growth during the project period with expansion of operations that included a continued broadening of the geography of the collection and to fully engage in applied restoration. The majority of support sustaining the Program is from an anonymous charitable contribution but also is supported through assistance from the VCU Foundation, Keep Virginia Beautiful, Virginia Green Travel Alliance, Dominion Energy and other small donations.



The program's growth into applied restoration was done through partnerships with the commercial fishing industry continues to realize benefits to returning shell to the ecosystem. The partnership with J&W Seafood increased to include support from EJ Wade Construction to assist in bulk movement of shell from the Rice Rivers Center to Gwynn's Island. This increase in capacity allowed a planting season which resulted in returning nearly 30 million oysters to the Piankatank. The season started with near normal events of recycling shells from public events but quickly changed once COVID-19 closed the seafood industry, restaurants and public gatherings. VCU began to implement strict measures to mitigate the spread of the virus and effectively shut the program down. However, employing COVID-safe best practices, the program was able to haul significant volumes of shell. The wholesale seafood industry was forced to dispose of massive volumes of oysters and sought the VOSRP as a recipient of that material. This provided for a significant volume of shell during a time when no other shell was being recycled.





Further employing COVID-safe best practices the program was able to inoculate one complete load of shell during the summer of 2020. Resulting in 7-8 million spat on shell being returned to the Piankatank River. An informal educational opportunity was employed to include the public in the process to remotely set the recycled shell. As the season progressed the shell recycling bin in Lancaster County was emptied with volunteers from the Chesapeake Bay Governor's School. A massive 220 bushels of shells were removed and hauled to the RRC.

During the grant cycle, the VOSRP Manager was offered the opportunity to submit a proposal for non-competitive, unspent, NOAA habitat restoration monies. The Virginia Marine Resources Commission (VMRC) was awarded funding to construct oyster reef in the Piankatank River and after completion came in under-budget. The NOAA funding was passed through the VCZM providing the opportunity for the VOSRP to create a proposal. Therefore, during COVID-19 while most funding sources were closed, a proposal was developed to support the recycling of shell in Richmond, geographic expansion into northern Virginia, and a focused outreach into the Middle Peninsula region.





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